

# David J Field

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

40  
papers

12,479  
citations

25  
h-index

43  
g-index

43  
ext. papers

14,585  
ext. citations

3.7  
avg, IF

6.62  
L-index

| #  | Paper  | IF  | Citations |
|----|--|-----|-----------|
| 40 | On the Role of LGN/V1 Spontaneous Activity as an Innate Learning Pattern for Visual Development. <i>Frontiers in Physiology</i> , <b>2021</b> , 12, 695431   | 4.6 | 0         |
| 39 | Dynamic Electrode-to-Image (DETI) mapping reveals the human brain's spatiotemporal code of visual information. <i>PLoS Computational Biology</i> , <b>2021</b> , 17, e1009456  | 5   | 0         |
| 38 | Revealing the cortical transformations of real-world scenes using dynamic electrode-to-image (DETI) mapping. <i>Journal of Vision</i> , <b>2021</b> , 21, 2641   | 0.4 |           |
| 37 | A geometric state-space framework reveals the evoked potential topography of the visual field. <i>Journal of Vision</i> , <b>2020</b> , 20, 1652   | 0.4 |           |
| 36 | Towards a state-space geometry of neural responses to natural scenes: A steady-state approach. <i>NeuroImage</i> , <b>2019</b> , 201, 116027   | 7.9 | 3         |
| 35 | Measuring the Information Content of Visually-Evoked Neuroelectric Activity. <i>Journal of Vision</i> , <b>2019</b> , 19, 48c  | 0.4 | 1         |
| 34 | Selectivity, hyperselectivity, and the tuning of V1 neurons. <i>Journal of Vision</i> , <b>2017</b> , 17, 9  | 0.4 | 6         |
| 33 | Conjectures regarding the nonlinear geometry of visual neurons. <i>Vision Research</i> , <b>2016</b> , 120, 74-92  | 2.1 | 10        |
| 32 | Local masking in natural images: a database and analysis. <i>Journal of Vision</i> , <b>2014</b> , 14, 22  | 0.4 | 28        |
| 31 | Local edge statistics provide information regarding occlusion and nonocclusion edges in natural scenes. <i>Journal of Vision</i> , <b>2014</b> , 14,   | 0.4 | 9         |
| 30 | Method for estimating the relative contribution of phase and power spectra to the total information in natural-scene patches. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2012</b> , 29, 55-67 | 1.8 | 7         |
| 29 | Mapping the similarity space of paintings: Image statistics and visual perception. <i>Visual Cognition</i> , <b>2010</b> , 18, 559-573   | 1.8 | 27        |
| 28 | Normative Visual Development: efficient coding principles for adult V1 predict properties of LGN waves prior to eye opening. <i>BMC Neuroscience</i> , <b>2010</b> , 11,   | 3.2 | 78        |
| 27 | Statistical regularities of art images and natural scenes: Spectra, sparseness and nonlinearities. <i>Spatial Vision</i> , <b>2008</b> , 21, 149-164   |     | 15        |
| 26 | Innate visual learning through spontaneous activity patterns. <i>PLoS Computational Biology</i> , <b>2008</b> , 4, e1000137  | 6.1 | 32        |
| 25 | Global nonlinear compression of natural luminances in painted art <b>2008</b> ,  |     | 9         |
| 24 | Variations in intensity statistics for representational and abstract art, and for art from the Eastern and Western hemispheres. <i>Perception</i> , <b>2008</b> , 37, 1341-52  | 1.2 | 61        |

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| 23 | Statistical regularities of art images and natural scenes: spectra, sparseness and nonlinearities. <i>Spatial Vision</i> , <b>2007</b> , 21, 149-64   |      | 110  |
| 22 | Estimates of the information content and dimensionality of natural scenes from proximity distributions. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>2007</b> , 24, 922-41 | 1.8  | 40   |
| 21 | Does spatial invariance result from insensitivity to change?. <i>Journal of Vision</i> , <b>2007</b> , 7, 11.1-13   | 0.4  | 16   |
| 20 | Can the theory of "whitening" explain the center-surround properties of retinal ganglion cell receptive fields?. <i>Vision Research</i> , <b>2006</b> , 46, 2901-13   | 2.1  | 60   |
| 19 | What image properties regulate eye growth?. <i>Current Biology</i> , <b>2006</b> , 16, 687-91   | 6.3  | 33   |
| 18 | How close are we to understanding v1?. <i>Neural Computation</i> , <b>2005</b> , 17, 1665-99  | 2.9  | 351  |
| 17 | Sparse coding of sensory inputs. <i>Current Opinion in Neurobiology</i> , <b>2004</b> , 14, 481-7   | 7.6  | 895  |
| 16 | Sensitivity to contrast histogram differences in synthetic wavelet-textures. <i>Vision Research</i> , <b>2001</b> , 41, 585-98  | 2.1  | 40   |
| 15 | Local contrast in natural images: normalisation and coding efficiency. <i>Perception</i> , <b>2000</b> , 29, 1041-55  | 1.2  | 82   |
| 14 | The role of "contrast enhancement" in the detection and appearance of visual contours. <i>Vision Research</i> , <b>1998</b> , 38, 783-7   | 2.1  | 61   |
| 13 | Contour integration in strabismic amblyopia: the sufficiency of an explanation based on positional uncertainty. <i>Vision Research</i> , <b>1997</b> , 37, 3145-61  | 2.1  | 87   |
| 12 | Sparse coding with an overcomplete basis set: a strategy employed by V1?. <i>Vision Research</i> , <b>1997</b> , 37, 3311-25  | 2.1  | 2196 |
| 11 | Visual sensitivity, blur and the sources of variability in the amplitude spectra of natural scenes. <i>Vision Research</i> , <b>1997</b> , 37, 3367-83  | 2.1  | 183  |
| 10 | Learning efficient linear codes for natural images: the roles of sparseness, overcompleteness, and statistical independence <b>1996</b> ,   |      | 3    |
| 9  | Wavelets, blur, and the sources of variability in the amplitude spectra of natural scenes <b>1996</b> , 2657, 108   |      | 2    |
| 8  | Emergence of simple-cell receptive field properties by learning a sparse code for natural images. <i>Nature</i> , <b>1996</b> , 381, 607-9  | 50.4 | 3599 |
| 7  | What's constant in contrast constancy? The effects of scaling on the perceived contrast of bandpass patterns. <i>Vision Research</i> , <b>1995</b> , 35, 739-56   | 2.1  | 91   |
| 6  | Contour integration across depth. <i>Vision Research</i> , <b>1995</b> , 35, 1699-711   | 2.1  | 43   |

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| 5 | Is the spatial deficit in strabismic amblyopia due to loss of cells or an uncalibrated disarray of cells?<br><i>Vision Research</i> , <b>1994</b> , 34, 3397-406   | 2.1 | 86   |
| 4 | What Is the Goal of Sensory Coding?. <i>Neural Computation</i> , <b>1994</b> , 6, 559-601  | 2.9 | 847  |
| 3 | Contour integration by the human visual system: evidence for a local "association field". <i>Vision Research</i> , <b>1993</b> , 33, 173-93  | 2.1 | 1365 |
| 2 | What The Statistics Of Natural Images Tell Us About Visual Coding <b>1989</b> ,  |     | 35   |
| 1 | Relations between the statistics of natural images and the response properties of cortical cells.<br><i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , <b>1987</b> , 4, 2379-94 | 1.8 | 1968 |